

## CLAIMS

1. A fuel container for fuel cell in which a solid or liquid fuel is placed, comprising a fuel gas supply port for supplying vapor of the fuel stored in the container to a liquid fuel supply system of the fuel cell.

2. A fuel container for fuel cell, comprising:

a fuel placing section in which a solid or liquid fuel is placed;

a vaporizing section communicated with the fuel placing section in which the fuel is vaporized; and

5 a fuel gas supply port supplying a vaporized fuel vaporized in the vaporizing section to a liquid fuel supply system of the fuel cell.

3. The fuel container for fuel cell according to claim 1 or 2, wherein a gas liquid separating section is provided on the fuel gas supply port.

4. The fuel container for fuel cell according to any one of claims 1 to 3, further comprising:

a fuel storage chamber in which a solid or fluid fuel is placed; and

5 a vaporizing chamber storing vapor of the fuel vaporized in the fuel storage chamber.

5. The fuel container for fuel cell according to claim 4, wherein the fuel storage chamber and the vaporizing chamber are partitioned by a gas liquid separating film.

-6. The fuel container for fuel cell according to any one of claims 1 to 5, wherein the fuel is a solidified material of an organic liquid fuel.

7. The fuel container for fuel cell according to any one of claims 1 to 6, being a fuel cartridge for fuel cell which is detachably provided to the fuel cell.

8. The fuel container for fuel cell according to any one of claims 1 to 7, wherein an openable and closable shutter member is provided to the fuel gas

supply port.

9. A fuel cell, comprising: a fuel electrode; a liquid fuel supply system supplying a liquid fuel to the fuel electrode; and a vaporized fuel supply section supplying a vaporized fuel to the liquid fuel supply system; wherein a gas liquid separating section selectively transferring the vaporized fuel is provided  
5 between the liquid fuel supply system and the vaporized fuel supply section.

10. A fuel cell, comprising: a fuel electrode; a liquid fuel supply system supplying a liquid fuel to the fuel electrode; and the fuel container for fuel cell according to any one of claims 1 to 8; wherein a gas liquid separating section selectively transferring vapor of the fuel to the liquid fuel supply system is  
5 provided between the fuel container for fuel cell and the liquid fuel supply system.

11. The fuel cell according to claim 9 or 10, further comprising a shutter member by which the supply of the vaporized fuel to the liquid fuel supply system starts and stops.

12. The fuel cell according to claim 10:  
wherein the liquid fuel supply system comprises,  
a fuel cartridge in which liquid fuel supplied to the fuel electrode is stored,  
and  
5 a fuel collecting section collecting a liquid discharged from the fuel electrode or the oxidant electrode; and

wherein the fuel container for fuel cell is constituted to supply vapor of the fuel to a liquid fuel mixing tank communicated with the fuel cartridge and with the fuel collecting section.

13. An operation method of fuel cell having a fuel electrode, a liquid fuel supply system supplying a liquid fuel to the fuel electrode:

wherein the fuel cell is operated while supplying a vaporized fuel having

a higher concentration than the concentration of the liquid fuel supplied to the  
5 fuel electrode.

14. The operation method of fuel cell according to claim 13,  
wherein the fuel cell is operated by circulating the liquid fuel, while collecting a  
residual fuel having passed through the fuel electrode or a water generated on  
an oxidant electrode.